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ABSTRACT

Although researchers have examined the link between job attitudes and turnover, some studies claim that civilian samples may not be generalizable to military personnel. This paper addresses two central questions: (1) To what extent does job satisfaction, job performance, and reenlistment intentions predict reenlistment behavior?; (2) To what extent does job satisfaction and job performance predict later-term attrition? The sample included soldiers in the U.S. Regular Army, serving their first term of enlistment. Researchers administered job satisfaction, job performance, and reenlistment intention measures to 5,706 participants who had enlisted for two-, three-, or four-year terms. As expected, intention to reenlist accurately predicted reenlistment, whereas job satisfaction and job performance proved to be less consistent and less influential predictors of reenlistment. Data analysis for the three-year enlistment term soldiers revealed that job satisfaction heightened predictive power beyond intention. The variance of enlistment rates by term suggests that soldiers, particularly those with two-year enlistments, might have different motivations for enlisting which in turn influence their decisions regarding reenlistment. Lower levels of job satisfaction and job performance indicated a higher probability of attrition for three and four year enlistments. Further analysis of army personnel turnover and job satisfaction is planned. Eight tables provide statistical summaries. (RJM)

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PREDICTION OF MILITARY TURNOVER USING INTENTIONS, SATISFACTION, AND PERFORMANCE

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Abstract

The research questions examined in this study relate to (1) the extent to which job satisfaction, job performance, and reenlistment intentions predict reenlistment behavior, and (2) the extent to which job satisfaction and job performance predict late-term attrition. The sample (n=5,706) comprised soldiers who were part of the Army's Project A/Building the Career Force performance research program's longitudinal validation sample. Logistic regression analyses indicated that intention to reenlist is a relatively powerful predictor of reenlistment behavior, whereas job satisfaction and job performance are less consistent and less influential predictors. Event history analyses showed that both job satisfaction and job performance contributed to the modeling of attrition. With no intention to attrit measure, however, these results are not directly comparable to the findings related to reenlistment behavior.

PREDICTION OF MILITARY TURNOVER USING INTENTIONS, SATISFACTION, AND PERFORMANCE[1]

INTRODUCTION

There has been a great deal of research examining the link between job attitudes and turnover (e.g., see Hom, Prussia, & Griffeth, 1992 and Tett & Meyer, 1993 for reviews). Yet it has been suggested that research conducted using civilian samples may not be generalizable to military samples (e.g., Hom, Katerberg, & Hulin, 1979; Knapp, 1993). Furthermore, empirical data from military turnover research are not so plentiful. Indeed, the available military research is rather sparse and has been conducted on diverse samples that may have only limited generalizability to each other (e.g., National Guard enlisted versus Regular Army enlisted).

Very little research has examined the relationship between job satisfaction and military attrition (i.e., separation before the enlistment contract expires). This is understandable given that most attrition occurs early in the enlistment term and is hypothesized to be related to problems of adaptability rather than to job dissatisfaction per se. Although there is more research examining the relationship between job satisfaction and military reenlistment behavior, most studies of reenlistment focus on factors other than job satisfaction (e.g., pay, reenlistment bonuses, spouse support, education). The amount of relevant military turnover research is also reduced by the fact that turnover research data collected on military personnel who enlisted prior to 1973 (i.e., before the end of the draft) are considered to be of limited generalizability to the All Volunteer Force (Boesel & Johnson, 1984; Etheridge, 1989; Mobley, Hand, Baker, & Meglino, 1979). Turnover-job satisfaction research conducted on samples of military personnel who enlisted in the mid-1970's or later is briefly reviewed below.

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Research Review

One-item measures of job satisfaction and intent to reenlist were included on Navy Occupational Task Analysis Program (NOTAP) surveys for four Navy ratings (i.e., jobs) in 1974 and 1975 (Royle & Robertson, 1980). For those sailors who had been in the Service for 47 months or less, correlations between job satisfaction and intent to reenlist were as follows: (a) .19 for aviation machinist mates (n=617), (b) .30 for electronics technicians (n=450), (c) .39 for torpedoman's mates (n=145), and (d) .30 for yeoman (n=412). All sailors in these samples were male, and an unknown (but presumably large) proportion of the sailors enlisted before the advent of the All Volunteer Force.

Data related to the study of precursors to reenlistment were collected from two samples of National Guard enlistees in the late 1970's (Hom et al., 1979; Hom & Hulin, 1981; Miller, Katerberg, & Hulin, 1979). National Guard personnel work on a part-time basis. They enlist for a six-year period initially, then make reenlistment decisions on an annual basis thereafter. Because the average tenure was between 5 and 6 years, most individuals in these samples were making their first reenlistment decision. The researchers collected reenlistment data six months following administration of the satisfaction and intention measures. Approximately 50% of the personnel in each sample had reenlisted. Miller et al. reported correlations among work satisfaction, reenlistment intentions, and reenlistment behavior for both samples (n_1=235; n_2=225). Reenlistment intention was measured on a single 7-point scale. The correlation between the work subscale of the Job Descriptive Index (JDI) and reenlistment was -.47 in sample 1 and -.50 in sample 2, the correlation between the work subscale and intention to reenlist was -.56 and -.57, and the correlation between reenlistment and reenlistment intention was .71 and .66. Note that the negative correlations reflect reverse coding of the reenlistment and reenlistment intention variables.

Motowidlo and Lawton (1984) collected data on expectancies, satisfaction, and reenlistment intentions on two samples of Regular Army enlisted personnel who were within six months of the end of their first enlistment term. Satisfaction was measured using an 11-item scale and reenlistment intentions were measured using a 3-item scale. Soldiers who

attrited before the end of enlistment and those whose terms had been extended were excluded from the analyses. Approximately 15% of the 320 soldiers in sample 1 reenlisted and 20% of the 299 soldiers in sample 2 reenlisted. The correlation between satisfaction and reenlistment was .20 for sample 1 and .26 for sample 2; correlations between satisfaction and reenlistment intention were .19 and .32, respectively; and correlations between reenlistment intention and reenlistment were .66 and .61.

Farkas and Tetrick (1989) reported on a longitudinal study in which a two-item job satisfaction measure and a two-item measure of reenlistment intention were administered to Navy enlisted personnel at three points during the first term of enlistment. The sample included 440 male enlistees who subsequently completed their first 4-year term, approximately 33% of whom reenlisted at the end of that term. Satisfaction measured at time 3 (i.e, after completion of advanced training) was correlated .65 with time 3 reenlistment intention and .20 with reenlistment. The correlation between time 3 reenlistment intention and reenlistment was .27.

LaRocco, Pugh, and Gunderson (1977) categorized 1,270 Navy first-term enlisted personnel into three groups: (1) those who reenlisted, (2) those eligible for reenlistment who did not reenlist, and (3) those who had attrited or who were ineligible for reenlistment. Using discriminant analysis, the researchers attempted to classify sailors into these groups based on a variety of variables (i.e., social background, Service history, satisfaction, and performance). Most measured aspects of satisfaction and reenlistment intention were useful for discriminating among the three groups. No correlations were reported. Given the conceptual differences between attrition and non-reenlistment, interpretation of this study's findings is complicated by the failure to distinguish attritees from non-reenlistees.

Youngblood, Mobley, and Meglino (1983) used a repeated measures analysis to examine expected utility of civilian and military roles, satisfaction, attrition intention, reenlistment intention, and turnover (attrition and non-reenlistment) data collected at three points in time from a sample of 1,445 Marine Corps enlisted personnel serving their first terms of enlistment. Data were collected at entry, at the end of training, and 18-20 months after entry. Results of the repeated measures analysis confirmed that the precursors of turnover behavior showed systematic fluctuations throughout the enlistment

term. For example, satisfaction decreased over time for all Marines in the sample, but it decreased less dramatically for those who completed their enlistments than for those who did not. Mobley et al. (1979) reported on an earlier phase of this research project which involved analyses of early attrition (within the first 11 weeks).

Summary of Research Review. This review identified a small number of studies that have examined the role of job satisfaction in the prediction of military turnover. The majority of this research has focused almost exclusively on reenlistment behavior. Job satisfaction and intention are consistently found to be related to reenlistment behavior. Many questions remain, however. Only one of these studies included a measure of performance (LaRocco et al., 1977). Others have not reported indices of association (or model fit) for the job satisfaction and reenlistment intention measures as predictors of turnover. Clearly, there is more to be learned about affective precursors to turnover in the military arena, even at the most elementary, bivariate levels of analysis.

Research Questions

The research questions to be addressed in this paper relate to (1) the extent to which job satisfaction, job performance, and reenlistment intentions predict reenlistment behavior, and (2) the extent to which job satisfaction and job performance predict late-term attrition. We hypothesized that both job satisfaction and reenlistment intention would be significantly correlated with reenlistment. It was further hypothesized that job satisfaction would provide incremental predictive value for predicting reenlistment over that provided by intention. Job performance indices were included in the analyses on an exploratory basis. We expected the predictive relationships to be stronger when soldiers ineligible for reenlistment were excluded from analysis.

With regard to attrition, we hypothesized that job satisfaction would be significantly related to this event. Again, no specific hypotheses related to job performance were proposed. Although we expected the models to fit better when the event to be predicted was restricted to voluntary attrition, we found

that we could not test this hypothesis because model fit was confounded with attrition base rate. That is, restricting the event of interest to voluntary attrition reduced the base rate which, in turn, led to decrements in model fit.

METHOD

Procedure

The sample comprises soldiers serving their first term of enlistment in the U.S. Regular Army. These soldiers entered the Army in 1986-1987 and participated in the longitudinal validation portion of the Project A/Building the Career Force performance measurement research program described in detail elsewhere (e.g., Campbell, 1990; Campbell & Zook, 1992). Teams of data collectors visited Army installations throughout the United States and Germany from August, 1988 through January, 1989 to administer the job satisfaction, job performance, and reenlistment intention measures. Turnover data were retrieved from computerized Army personnel records late in 1992. By that time, all soldiers in the sample had reached the end of their first enlistment terms.

Sample Characteristics

Job satisfaction, job performance, reenlistment intention, and turnover indices were available for 5,706 soldiers who had enlisted for 2, 3, or 4-year enlistment terms. Because of the very small numbers, soldiers with 5- and 6-year terms were excluded from the analysis sample. Soldiers in the sample were drawn from nine military occupational specialties (MOS) which were selected to represent the population of over 200 Army entry-level enlisted jobs. Table 1 provides demographic information regarding the soldiers in this sample. Note that a relatively small percentage of soldiers had enlisted for a 2-year term.

Table 1

Sample Description

Race/Ethnic Group		Sex		Paygrade	
White	67%	Male	86%	E1	2%
Black	25%	Female	14%	E2	11%
Hispanic	4%			E3	51%
Other	4%			E4	36%

Military Occupational Specialty			Enlistment Term	
11B	Infantryman	14%	2 Years	10%
13B	Cannon Crewman	13%	3 Years	59%
19E/K	Tank Crewman	16%	4 Years	31%
31C	Radio Channel Operator	7%		
63B	Light Wheeled Vehicle Mechanic	11%		
71L	Administrative Specialist	9%		
88M	Motor Transport Operator	10%		
91A	Medical Specialist	13%		
95B	Military Police	7%		

Note. n=5,706.

Measures

Job satisfaction. Job satisfaction was measured using a 20-item questionnaire developed for Project A. The Army Job Satisfaction Questionnaire (AJSQ) includes items directed at six content areas: supervision, co-workers, promotions, pay, work, and the Army. Soldiers responded to each item using a five-point scale ranging from *Very Dissatisfied* to *Very Satisfied*. Scores for each content area were constructed by computing the average rating across the 3-4 constituent items. A composite score was derived by calculating the average rating across all 20 items. Because of analysis problems caused by multicollinearity, only the overall composite score was used in the analyses reported herein. Mean and standard deviations for the AJSQ overall score, computed for the sample as a whole and by enlistment term, are shown in Table 2. Coefficient alpha for the overall score is .90.

Table 2

Means and Standard Deviations for Job Satisfaction, Job Performance, and Proportion of Term Completed When These Measures Were Administered

Variable	Mean	SD
Total Group (n=5,706)		
Job Satisfaction	2.77	0.67
Job Performance	500.19	50.30
Proportion Term Completed	0.51	0.18
Two-Year Enlistment Term (n=535)		
Job Satisfaction	2.66	0.60
Job Performance	512.08	49.81
Proportion Term Completed	0.72	0.17
Three-Year Enlistment Term (n=3,383)		
Job Satisfaction	2.74	0.68
Job Performance	498.21	50.06
Proportion Term Completed	0.55	0.14
Four-Year Enlistment Term (n=1,788)		
Job Satisfaction	2.84	0.67
Job Performance	500.38	50.43
Proportion Term Completed	0.36	0.12

Job performance. A comprehensive array of job performance measures were administered to the soldiers in this sample. The measures included hands-on performance tests, written job knowledge tests, administrative indices of performance, and supervisor and peer ratings of performance. Five factor scores were constructed using data from these measures (Oppler, Childs, & Peterson, 1992). They are core technical proficiency, general soldiering proficiency, effort and leadership, personal discipline, and physical fitness and military bearing. As with job satisfaction, a single overall composite job performance score was constructed from these subscores. This was a sum of the standardized, unit-weighted subscores. Descriptive statistics for this composite are shown in Table 2.

Proportion term completed. It was expected that soldiers having more time remaining in their first term would be more likely to attrit, regardless of their level of job satisfaction or job performance. The fact that 3-year enlistees had an 11 percent attrition rate compared to the 20 percent attrition rate for 4-year enlistees supports this hypothesis. Base rate differences across enlistment terms were controlled by conducting turnover analyses for soldiers in each enlistment term separately. A special variable was constructed to provide a control variable for differences in time remaining for soldiers within each enlistment term. This variable is expressed as the proportion of the soldier's term that had expired at the time that the research measures were administered. Means and standard deviations for this variable are provided in Table 2. As expected, the mean proportion of term which had expired at the time of testing decreases as the length of the enlistment term increases.

Reenlistment intentions. The AJSQ included a section comprising several supplementary items of potential interest to job satisfaction research. The section included the question "What do you think you will do after this enlistment?" Answers to this question were scored as follows: (0) leave the Army, (1) don't know, and (2) reenlist. Approximately 69% of the soldiers in the sample indicated that they would leave the Army, 15% said that they would reenlist, and 16% indicated that they were undecided.

Turnover. Each soldier was classified into one of the five turnover outcome categories defined by Knapp (1993). The categories and the percentage of soldiers classified into each are given in Table 3. For the reenlistment analyses, reenlistees were compared to soldiers who completed their initial term of enlistment. Soldiers who left the Army before the completion of their enlistment terms were excluded from these analyses. Note that the actual reenlistment rate (38%) is substantially higher than the reenlistment intention rate (16%). This finding is consistent with prior military research (Hiller, 1982).

For the attrition analyses, soldiers who separated prematurely for avoidable reasons were compared to those who did not. Because event history analysis was used to conduct the data analysis, no observations had to be excluded from the analysis. The use of this analysis method, which incorporates the timing of event occurrence, required that attrition be assessed periodically (i.e., monthly) over the duration of each soldier's enlistment term. See McCloy (1993) and Morita, Lee, and Mowday (1989), among others, for discussions regarding the application of event history analysis. Note that the number of soldiers that exit prematurely is small in this sample because attrition is most likely to occur early in the first enlistment term. Because of the timing of the job satisfaction and job performance testing, soldiers had to have already made it well into their first term in order to have been included in our sample.

Table 4 shows the bivariate correlations among the variables used in this research. As hypothesized, reenlistment intention and job satisfaction were significantly correlated with reenlistment ($p = .0001$), as was job performance. Job satisfaction and job performance were also significantly correlated with attrition.

RESULTS

Reenlistment Analyses

Logistic regression was used to examine reenlistment behavior in this study. The relative contribution of the three predictors (i.e., intention, job satisfaction, and job performance) was assessed by evaluating the

Table 3

Turnover Criterion Groups

Criterion Group	Number	Percent
1. Reenlisted	1,817	31.8
2. Separated at completion of term	2,931	51.4
3. Attrited for unavoidable reasons	222	3.9
4. Voluntarily attrited for avoidable reasons	492	8.6
5. Involuntarily attrited for avoidable reasons	244	4.3
Total	5,706	100.0
Aggregation Used for Reenlistment Analyses		
Reenlisted (Group 1)	1,817	38.3
Not Reenlisted (Group 2)	2,931	61.7
Total	4,748	100.00
Excluded from Analysis (Groups 3, 4, 5)		
Aggregation Used for Attrition Analyses		
Avoidable attrition (Groups 4 and 5)	736	12.9%
Non-attrition (Groups 1, 2, and 3)	4,970	87.1%
Total	5,706	100.0

Table 4

Intercorrelations Among Study Variables

	JS	JP	Intent	Reenlist	Attrition
Job Satisfaction					
Job Performance	.189				
Intention	.268	.074			
Reenlistment[a]	.158	.132	.368		
Attrition[b]	-.089	-.263	-.061	-.263	
Proportion Term Completed	-.080	.126	*-.025*	*.026*	-.196

Note. n=5,706; all correlations, except those in italics, are significant at p=.0001.

[a] This row contains point-biserial correlations; given the 38% reenlistment base rate, the maximum possible value is approximately .80; reenlistment coded 1 if reenlisted and 0 if not.

[b] This row contains point-biserial correlations; given the 13% attrition base rate, the maximum possible value is approximately .60; attrition coded 1 if attrited and 0 if not.

improvement of model fit with the addition of each predictor to the model. Intention was the first predictor entered into the model because it is generally believed to be the most immediate precursor to turnover (e.g., Mobley et al., 1979). Performance was entered last because, although its relationship to reenlistment was unknown, it was not expected to be related as strongly to reenlistment as satisfaction would be.

The effect of adding each variable to the model was evaluated by conducting likelihood ratio tests. A likelihood ratio test is conducted by computing the difference between the logs of the likelihood ratios for each model (i.e., the model with the new variable and the model without the new variable). This difference, multiplied by -2, is distributed asymptotically as chi-square, with degrees of freedom, in this case, equal to one. In addition, an index of the predictive strength of each model was constructed by calculating the point-biserial correlation between the predicted probability of reenlistment, as determined by each model, and actual reenlistment behavior.

Separate reenlistment analyses were conducted for soldiers in each enlistment term (2, 3, and 4 years). Despite a priori concerns about the accuracy of the enlistment eligibility index retrieved from Army files, exclusion of soldiers labeled as ineligible resulted in somewhat more accurate prediction than that obtained when they were included in the analyses. Thus, the analyses reported herein exclude soldiers who were ineligible for reenlistment.

Results of the comparison among reenlistment prediction models are summarized in Table 5. For all three enlistment terms, all three models are statistically significant. However, the incremental contribution of job satisfaction and job performance over reenlistment intention appears to be minimal. There are no significant differences among the three models for 2-year enlistees. The addition of job satisfaction provides incremental predictive power over intention for 3-year enlistees, but the addition of job performance to those two predictors does not improve the model fit. In contrast, the addition of job satisfaction to the model does not significantly improve model fit for 4-year enlistees, but the addition of job performance does. Clearly, the most powerful and consistent predictor of reenlistment behavior in this study is reenlistment intention. This conclusion is

Table 5

Point-Biserial Correlations Between Reenlistment and Predicted Probability of Reenlistment for Three Models

Alternative Models	Enlistment Term 2	3	4
Intention	.548	.399 [b]	.293
Intention, Satisfaction	.553 (.546)[a]	.402 (.400)	.293 (.287) [b]
Intention, Satisfaction, Performance	.553 (.544)	.402 (.399)	.301 (.293)
n	492	2,753	1,322
Reenlistment Rate[c]	14%	45%	39%
Maximum r_{pb}[d]	.60	.81	.80

Note. All models have chi-squares significant at $p < .05$.

[a]Correlations in parentheses are adjusted for shrinkage using formula from Stein (1960).

[b]Differences in model chi-squares are significant at $p < .05$.

[c]Among those soldiers eligible to reenlist.

[d]Estimated from Figure 4-5 in Nunnally (1967, pg. 133).

supported by examining the prediction equation parameters provided in Table 6.

The point-biserial correlations between the predicted probability of reenlistment and actual reenlistment suggest that the reenlistment behavior of 3-year enlistees is predicted more successfully than that of the 4-year enlistees. Despite a relatively low reenlistment base rate, the reenlistment behavior of 2-year enlistees is most accurately predicted. This finding is particularly interesting given that the maximum point-biserial correlation possible with the 2-year term's 14 percent reenlistment base rate (r_{pb}=.60) is considerably lower than that possible with the 3-year term's 45 percent base rate (r_{pb}=.81).

Attrition Analyses

Event history analysis was used to model attrition in this study. The event of interest was avoidable attrition (both voluntary and involuntary) as described in Knapp (1993). All other turnover-related outcomes (i.e., reenlistment, completion of first term, unavoidable attrition) were censored observations.

Analyses were performed separately for soldiers with 3-year and 4-year enlistment terms. Due to small sample sizes, data from soldiers with 2-year terms of enlistment were not analyzed. As expected, the base rate of attrition was markedly higher for 4-year enlistees (21%) than for 3-year enlistees (13%). Analyses were stratified by MOS because the hazards were assumed to be disporportional across MOS.

The event history analyses were intended to assess the incremental contribution of three variables to the prediction of avoidable attrition. This was done by comparing the overall fit of the following three nested models: (1) proportion of term completed when measures were administered, (2) proportion of term completed and satisfaction, and (3) proportion of term completed, satisfaction, and performance. The proportion of term completed when the intention, satisfaction, and performance measures were administered was considered a statistical control variable and was therefore always entered first into the model. Satisfaction was entered into the model before performance because it was expected to be more strongly related to attrition.

Table 6

Prediction of Reenlistment Using Three Predictors

Predictor	Parameter Estimate	Standard Error	p	Risk Ratio
2-Year Term				
Intercept	-3.889	1.714	0.0232	0.020
Intention	1.990	0.236	0.0001	7.319
Satisfaction	0.395	0.266	0.1375	1.485
Performance	0.001	0.003	0.8256	1.001
n = 492 14% reenlistment				
3-Year Term				
Intercept	-1.494	0.470	0.0015	0.224
Intention	1.068	0.059	0.0001	2.911
Satisfaction	0.157	0.066	0.0169	1.170
Performance	0.000	0.000	0.5479	1.001
n = 2,753 45% reenlistment				
4-Year Term				
Intercept	-2.571	0.681	0.0002	0.076
Intention	0.779	0.080	0.0001	2.179
Satisfaction	0.015	0.094	0.8730	1.015
Performance	0.003	0.001	0.0118	0.084
n = 1,322 39% reenlistment				

The model chi-squares and results of comparisons among them are shown in Table 7. All models were statistically significant ($p<.05$) for both 3- and 4-year enlistment terms. Comparison of the model chi-squares indicates that the addition of each predictor provided incremental predictive power, again for soldiers in both enlistment terms. Parameter estimates for the model including all three predictors are provided in Table 8. The risk ratios, for example, show that for each unit increase in job satisfaction, a 3-year term soldier's hazard for attrition decreases to a level that is 80.3 percent of what it is currently, whereas a unit increase in job performance decreases an individual's hazard to 98.5 percent of its current value. Neither the hazard nor the survivor functions are shown because they show a fairly constant rate of attrition over the time covered in this investigation (i.e., mid to late in the enlistment term).

Table 7

Comparison of Three Attrition Prediction Models

	Chi-Square	
Alternative Models	Three-Year Term	Four-Year Term
Proportion[a]	4338.500	3764.785
Proportion, Satisfaction	4307.257	3721.488
Proportion, Satisfaction Performance	4098.777	3608.739
Sample size	3,432	1,646
Event base rate	365 (11%)	337 (20%)

Note: Comparisons for successive models are all significant at $p < .05$.

[a] Proportion of term completed when satisfaction and performance were assessed.

Table 8

Prediction of Avoidable Attrition Using Three Predictors

Predictor	Parameter Estimate	Standard Error	p	Risk Ratio
3-Year Term				
Proportion[a]	-2.686	0.395	.0001	0.068
Satisfaction	-0.219	0.079	.0055	0.803
Performance	-0.015	0.001	.0001	0.985
n = 3,432 11% attrition				
4-Year Term				
Proportion[a]	-1.848	0.567	.0011	0.158
Satisfaction	-0.344	0.081	.0001	0.709
Performance	-0.012	0.001	.0001	0.988
n = 1,646 20% attrition				

[a] Proportion of term completed when satisfaction and performance were assessed.

DISCUSSION

Bivariate Results

Relationships among the major variables in this research (intention to reenlist, job satisfaction, job performance, reenlistment, and attrition) can be compared to the military research reviewed earlier in this paper and to the results of published meta-analyses of related research. Three meta-analyses of particular relevance are those conducted by Hom et al. (1992), Tett and Meyer (1993), and McEvoy and Cascio (1987). Hom et al. examined relationships among various withdrawal cognitions (e.g., search intentions, quit intentions), job satisfaction, and turnover by cumulating the results of both civilian and military research studies. Tett and Meyer excluded military studies in their meta-analytic examination of the relationships among turnover intention, job satisfaction, organizational commitment, and turnover. McEvoy and Cascio cumulated results of studies which examined the relationship between job performance and turnover. When comparing results across studies, it is important to remember that the signs of the correlations will be reversed when one is comparing, for example, research examining intention to reenlist with that examining intention to quit. This is true even when looking at the results of the present study in isolation, because satisfaction and performance are positively associated with *reenlistment* (and reenlistment intention) whereas they are negatively associated with *attrition*.

We will first review the relationships involving reenlistment intention. The point-biserial correlation between job satisfaction and reenlistment intention found in this research (r_{pb}=.268) is comparable to the correlations reported previously for six of seven samples of full-time enlisted U.S. military personnel (Farkas & Tetrick, 1989; Motowidlo & Lawton, 1984; Royle & Robertson, 1980). In comparison to civilian research on satisfaction and intention to quit, the correlation between satisfaction and intention to reenlist is on the low side. Tett and Meyer (1993) reported a mean, sample-size weighted correlation between satisfaction and withdrawal cognitions (including intention to quit) of -.479. Hom et al. (1992) reported a mean correlation between satisfaction and intention of quit of -.403. In contrast, the present study's point-biserial correlation between reenlistment intention

and reenlistment (.368) appears to be somewhat higher than that found with research in other settings. Tett and Meyer reported a mean, sample size weighted correlation between intention to quit and turnover of .280 and Hom et al. reported a mean correlation of .325. The Tett and Meyer correlation is probably relatively low because it includes withdrawal cognitions other than intention to quit (e.g., intention to search). The Hom et al. results may be closer to those obtained here because they included several military studies in their meta-analysis.

With regard to the bivariate relationship between satisfaction and turnover, the observed point-biserial correlation between satisfaction and reenlistment in this research is .158 and the correlation between satisfaction and attrition is -.089. The reenlistment finding is consistent with prior research on similar military samples (Farkas & Tetrick, 1989; Motowidlo & Lawton, 1984). It is also similar in magnitude to the meta-analytic findings reported by Tett and Meyer (r_{pb}=-.141) and Hom et al. (r_{pb}=-.158). Given the fact that turnover base rates are generally higher in military than in civilian samples, however, it seems reasonable to speculate that the relationship between satisfaction and turnover might actually be somewhat weaker when turnover is defined as military reenlistment (actually non-reenlistment). The relationship appears to be more complex when turnover is defined as military attrition. Although, the overall correlation was relatively small, correlations computed separately by enlistment term showed that this was true primarily for the 3-year term soldiers. Correlations based on 2- and 4-year term soldiers were -.108 and -.140, respectively, compared to -.087 for 3-year term soldiers.

In the present research, the point-biserial correlation between job performance and reenlistment was .132 and the correlation between performance and attrition was -.263. In their meta-analysis, McEvoy and Cascio (1987) reported a sample size-weighted mean correlation between job performance and turnover of -.22 across 24 studies (of which all but two were civilian). This suggests that, with regard to relationships to performance, military attrition may be more comparable to civilian turnover than is military non-reenlistment.

Multivariate Models

Reenlistment Analyses. As expected, intention to reenlist was a powerful predictor of reenlistment. Although analysis of data from 3-year enlistment term soldiers confirmed our hypothesis that satisfaction would provide incremental predictive power beyond intention, analysis of data from the 2- and 4-year enlistment term soldiers did not. Job performance also failed to provide incremental model fit in two of the three enlistment terms. This finding, however, was not particularly unexpected.

Of interest are the different findings across enlistment terms. The fact that the reenlistment rate varies by term suggests that soldiers, particularly those with 2-year enlistments, might have different motivations for enlisting in the first place (e.g., to get money for college) which, in turn, influence their motivations regarding reenlisting. The finding that predictions for 2-year term soldiers tended to be more accurate than the predictions for soldiers with 3- and 4-year enlistments may be due in part to these differences. That is, an individual may enlist for the shortest possible term specifically because he or she wants to keep the military obligation as brief as possible. In contrast, individuals who are predisposed to making the military a career are probably more likely to enlist for lengthier terms. Another reason for the relatively accurate prediction of reenlistment behavior for 2-year term soldiers is that some, perhaps many, of these soldiers had probably already informed the Army of their reenlistment decisions when reenlistment intention was assessed.

The logistic regression analyses used to examine reenlistment in the present research did not provide results that are directly comparable to previous multivariate military research. For example, Motowidlo and Lawton (1984) used path analysis and Farkas and Tetrick (1989) used LISREL analysis. These researchers were interested in testing alternative models of turnover whereas the goal of the present research was to evaluate the incremental contribution of several predictors. We chose a more exploratory approach because we did not have measures of the withdrawal cognition variables hypothesized to intervene between satisfaction and intention to quit (see Mobley et al., 1979) and because we were uncertain as to how to handle job performance since it is not included in the major turnover models.

Attrition Analyses. In contrast to the prediction of reenlistment, lower levels of job satisfaction and job performance were associated with a higher probability of attrition for both enlistment terms that were examined. The findings are not directly comparable, however, because there was no measure of the intention to attrit. Such a measure might have served to reduce the influence of both satisfaction and performance as intention to reenlist did in the reenlistment analyses.

Future Research

Further analyses of the turnover and job satisfaction data from the Army's Project A/Building the Career Force research program are planned. Specifically, many of the soldiers in this research who served a second term of enlistment were administered job satisfaction, job performance, and reenlistment intention measures during that second term. Thus, we have the data to examine prediction models for reenlistment to a third term. We will also "roll up" the data from the two enlistment terms to test more complex models which describe how job satisfaction changes over time and the relative influence of this variable on reenlistment into second and third terms.

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